

93°, at Kansas City and San Antonio. Mean daily temperatures of 91° and 92° have been recorded generally throughout these regions. On the immediate Gulf Coast and in the extreme lower Mississippi Valley the highest means for one day that have been noted have been from 87° to 89°. In New England, the Middle Atlantic States, the region of the Great Lakes, the Rocky Mountain and the Plateau regions the highest mean daily temperatures have been about 85°.

The lowest mean daily temperatures have ranged from 75°

on the Gulf to 55° in the northern portions of the United States. In the greater part of the country the lowest mean temperatures range between 60° to 65°.

North of the thirty-fifth parallel of latitude the mean daily temperature is generally from 4° to 6° higher in July than in June, and from 2° to 3° higher than in August. South of this parallel the July means are from 2° to 3° greater than those for June, and 1° to 3° greater than for August.

## NOTES BY THE EDITOR.

### LETTER TO VOLUNTARY OBSERVERS.

U. S. DEPARTMENT OF AGRICULTURE,  
WEATHER BUREAU,  
Washington, D. C., July 20, 1895.

*To Voluntary Observers, Forecast Displaymen,  
and Crop Correspondents of the Weather Bureau:*

In assuming charge of the Weather Bureau, as its Chief, to which position I was recently appointed by the President of the United States, I desire to express to the voluntary observers, forecast displaymen, and weather crop correspondents through the Directors of the several State Weather Service organizations, my high appreciation of the value of the services, voluntarily rendered by them in their several lines, without which it would be wholly impracticable for the Bureau to carry on some of its most important work.

Having for a number of years been actively engaged in state weather service work, I have, in my official career, been placed in close relations with those serving the Bureau in a voluntary capacity, and the high estimate of the value of their cooperation is based upon a practical knowledge of the valuable results that have been attained.

It is my most earnest desire to make the Bureau of the utmost value to the general public in every way possible, and, with the continued cooperation of those who have contributed so much to that end in the past, it is believed that the future usefulness of the Bureau will be greatly increased.

Very respectfully,

WILLIS L. MOORE,  
Chief of Weather Bureau.

### REPLIES TO CORRESPONDENTS.

The great interest taken in meteorology is emphatically manifested by the self-denying labors of the voluntary observers throughout our country, who everywhere maintain meteorological records with a persistence and thoroughness that redounds to the benefit of science. The labors of such men during the past two centuries have been the basis on which our present knowledge is founded. Sometimes, however, the efforts of individuals to advance our knowledge take the form of rather wild suggestions. The Chief of the Weather Bureau finds frequent occasion to encourage the well-directed efforts of our most enterprising co-laborers, but those whose suggestions are not indorsed favorably should not be too deeply disappointed. Communications are often received that reveal imperfect knowledge of the laws of meteorology, even on the part of those who are otherwise well informed. This is not to be wondered at when we consider how few have had an opportunity of studying the motions of the atmosphere on a large scale, or of investigating the minuter details of localities, instruments, and records. In order, however, that the members of the service may profit by our wider knowledge of these matters the Chief imposes upon the editor the duty of making some response. He hopes thus to disseminate in this country sound views as to meteorology.

#### (a) *Thermometric scales used in meteorology.*

A recent proposition to change the scale of our thermometers, viz, to put the zero higher up, viz, at the so-called "blood-heat" or internal temperature of the human body, and to count all temperatures as negative below that point and positive above it, meets with unqualified disapproval.

The thermometer was originally introduced into science by physicians, who wished to measure the so-called temperament of the patient, but this was nearly three hundred years ago, and the instrument that was used by the physician Sanctorius was crude and was, in fact, abandoned as soon as Galileo and the glass-blowers of Florence made more accurate instruments, almost identical with the mercurial and spirit thermometers of to-day. For nearly two centuries thermometer makers amused themselves with devising new variations on the early methods of graduating and numbering the scale. Any one of these would have answered the need of the meteorologist and all were more or less arbitrary, but the great diversity led to unnecessary confusion and trouble, and the tendency of the last century has been to use either the Centigrade or the Fahrenheit scale to the exclusion of all others. The motto of the scientific world is—uniformity and simplicity in the units and standards by which we measure all dimensions and forces. At present the metric system is the one most used by scientists, but the English system, which is far less simple, still has many adherents. No others are needed. Uniformity or conformity with a single standard is most desirable.

#### (b) *The winds of Japan and Arizona.*

A correspondent seems to have adopted the idea that the northwest winds of Japan and the southeast winds of Arizona may be considered as one system blowing towards each other and mutually affecting each other. A glance at any work on physical geography or meteorology shows that regions separated from each other so far as these, have lying between them other systems of winds, so that the conditions prevailing at these extremes can only affect each other by a very indirect route, if at all. It is true that northerly winds prevail at certain seasons on the coasts of China and Japan and at certain other seasons on the coast of California, but the latter wind is not at all to be considered as a continuation of the former. There can be no doubt but that the conditions and phenomena in the atmosphere over one part of the globe have some sort of an effect on the conditions and phenomena everywhere else, but what this effect may be, or how appreciable it is, is a very difficult question. Before we speculate on the influence of the weather in Japan upon that in Arizona we must make sure that we first understand the mutual influence of the weather in regions that are nearer home.

### CLOUD PHOTOGRAPHY.

Referring to the article on cloud photography in the MONTHLY WEATHER REVIEW for May, Mr. A. J. Henry desires to state that in the formula for the developer the quantity of C and P should have been stated at 16 parts of each (by weight) to 100 parts of water (fluid ounces). In addition to the normal developer, there described, the following modifications may be found useful. For under-exposed plates use the normal developer without the bromide. When great contrasts are desired use the following: 75<sup>c</sup> H + 10<sup>c</sup> each P, C, and B.